

Current Status of Claims

1. (*previously presented*) A multifunctional switch device having tilt functions, intended for use in electronic equipment such as computers, handheld electronic apparatus and/or devices associated with use in means of transport such as vehicles, boats and aircraft, said equipment having or being connected to a display for function control, the switch device having a central tilting device consisting of a housing which surrounds two mutually movable, cardan coupling-supported parts, a first of the parts mounted to the housing or to a base part of the device at a first pair of supporting points, and a second of the parts supported on the first part at a second pair of supporting points which are offset 90° relative to the first pair, characterised in

- that the switch device has an operating member or element which is stepwise rotatable relative to the housing with means to detect stepwise position of the operating member,
- that the operating member is tilttable as well as downward pressable,
- that the second part of the tilting device has arms in a cross shape that are configured to actuate underlying switch contact points upon tilting of the operating element, and
- that the second part has a hole in the centre for slidably receiving a shaft located on the operating member, said member forming a rotatable, tilttable and depressible part of the switch, said shaft operative as an actuator for a centrally underlying switch contact point.

2. (*previously presented*) A multifunctional switch device as disclosed in claim 1, characterised in

- that the housing, being in the shape of a ring, as well as said first part and said second part are fixedly attached to each other to form a one-piece unit, the supporting points being flexible and torsional for mutual cardan movement.

3. (*previously presented*) A multifunctional switch device as disclosed in claim 1, characterised in

- that the first of the two mutually movable, cardan coupling-supported parts is mounted to a switch base at a first pair of supporting points; and that second of said parts is supported on the first part at a second pair of supporting points which are offset 90° relative to the first pair, said first and second parts forming a one-piece unit.

4. (*currently amended*) A multifunctional switch device as disclosed in claim 1, [2 or 3,] characterised in

- that the mutually movable parts of the tilting device are made of a flexible material.

5. (*currently amended*) A multifunctional switch device as disclosed in claim 1, [2 or 3,] characterised in

- that the two mutually movable parts of the tilting device are mounted on supporting points via shafts partly rotatable therein.

6. (*currently amended*) A multifunctional switch device as disclosed in [anyone of claims 1–5,] **claim 1**, characterised in

- that a centre portion of the tilting device which forms a mount for the rotatable shaft of the operating element has a plurality of vertical faces and/ or grooves, against which at least one spring of the switch device rides in order to effect stepwise rotation of the operating element.

7. (*original*) A multifunctional switch device as disclosed in claim 6, characterised in

- that the stepwise rotation is detected by means of contact springs which tilt on contact with grooves in the rotary element, and form contact with and/or short circuit at associated contact points arranged on the frame of the switch device.

8. (*currently amended*) A multifunctional switch device as disclosed in [anyone of claims 1—7,] **claim 1**, characterised in

- that the first part of the tilting device is fixedly attached to the second part via a second pair of supporting points, wherein the supporting points are flexible and torsional.

9. (*previously presented*) A multifunctional switch device as disclosed in claim 8, characterised in

- that the first part of the tilting device has a pair of projecting tilt pins for pivotal engagement with the first pair of supporting points.

10. (*currently amended*) A multifunctional switch device as disclosed in [anyone of claims 1—9,] **claim 1**, characterised in

- that the first part of the tilting device has a pair of supporting points which are fixedly attached to the base and a frame, wherein the supporting points are flexible and torsional.

11. (*previously presented*) A multifunctional switch device as disclosed in claim 6, characterised in

- that spring is fastened to a rotatable operating member of the switch device.

12. (*previously presented*) A multifunctional switch as disclosed in claim 11, characterised in

- that the spring is of the wire type and is in the form of a clip.

13. (*currently amended*) A multifunctional switch device as disclosed in ~~[anyone of claims 1 – 12,]~~ **claim 1**, characterised in

- that the rotatable operating member which is pivotally supported in the tilting device has mounted thereon an annular slip ring for sensing against contact fields located on a frame part of the device for detection of a rotary position of the operating in relation to the base of the device.

14. (*previously presented*) A multifunctional switch as disclosed in claim 13, characterised in

- that said annular slip ring has two diagonally located points for attachment to the operating member and two diagonally located pins for contacting the contact fields.

15. (*currently amended*) A multifunctional switch device as disclosed in ~~[one or more of claims 1 – 14,]~~ **claim 1**, characterised in

- that the base of the switch device has a plurality of snap discs and associated plurality of contact fields to provide for respective switch functions upon tilting or depression of the operating member; and
- that the base has mounted thereon an outer frame internally of which is located in a ring configuration a plurality of contact fields which contact points on the slip ring touch for detection of rotary position of the operating member relative to the device base.

16. (*currently amended*) A multifunctional switch device as disclosed in [anyone of claims 1—15,] **claim 1**, characterised in

- that central depression of the operating member and its shaft part is designed to cause collapse of an underlying snap disc on a central contact field , whilst pressure on an outer part of the operating member or tilting of the operating member is designed to provide a movement of the tilting device which causes, through interaction with one of the arms on the tilting device, a collapse of one of the outer snap discs on an associated contact field underlying said arm.

17. (*currently amended*) A multifunctional switch device as disclosed in [one or more of claims 1—16,] **claim 1**, characterised in

- that the operating member has an outer face, or is encased by a part made having an outer face which is smooth or has contours, dimples or structures for friction against a user's finger in the peripheral area; and
- that the outer face is concave in a central part thereof and with a tactile pin or depression is arranged in the centre.

18. (*currently amended*) A multifunctional switch device as disclosed in [anyone of claims 1—17,] **claim 1**, characterised in

- that the operating member is centrally depressible, stepwise rotatable, as well as tilttable in four directions in order to actuate respective switch functions associated with such available movements of the switch device.